

Introduction to Generative Art, Part 1: Combining Coding, AI, and Art

February 18, 2023. 2-3:30pm. 46 Bridge St., New Milford CT

This workshop is part of the Robotics And Beyond AI Initiative. This project is intended to inform the young people, parents and the public in general about the opportunities and potential risks posed by Artificial Intelligence and its increasing presence in society, culture, education and the workplace.

In this workshop, students will learn to create unimaginable designs through the use of coding and algorithms. Unlock the power to create an infinite number of artistic, computer-generated images by understanding the fundamentals of how programming, algorithms, and math are combined for this purpose. Participants will gain experience using a pre-built software routine of a Mandelbrot Set to create original designs and discover how the images can be explored by zooming through an infinite number of levels. The designs look very different, but they are all in one family and are possible to create after this session. In addition, students will have the opportunity to experiment with template code and will create their own designs by the end of the workshop.

After this session, students will receive a list of resources to continue exploring generative design. A following workshop will be offered for older students looking to dive deeper into the math concepts, algorithms, and code involved with generative art.

Pre-requisites: students in grades 6-12 or by permission, and adults. No coding experience is required.

Computer requirements: computers will be provided but participants are encouraged to bring their own laptops to make it easier to continue working with the methods at home.

Introduction to Generative Art, Part 2: Coding of Mandelbrot Sets

A second workshop will be scheduled for February or March providing insight to actual coding of the algorithms behind Mandelbrot sets used for generative art. Some experience will be required with any text based coding language, such as Python, Java, Java Script, Swift or others. Limited to grades 8-12 and adults or by permission. Participants must have learned math at least through graphing and beginning algebra.

Introductory Resources Related to Generative Art Workshops

Explanation of Mandelbrot Set: <https://youtu.be/FFfmWSzgmk>

Mandelbrot Zoom: <https://www.youtube.com/watch?v=b005iHf8Z3g>